

1626

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of) Examiner: Shameem, G. M.
John E. T. Corrie et al.) Art Unit: 1626
Serial No.: 09/936,975)
Filed: December 27, 2001) Attorney reference No:
For: "1-ACYL-7-NITROINDOLINE) 0380-P02671US0
DERIVATIVES, THEIR)
PREPARATION AND THEIR USE) AS PHOTOCLEAVABLE)
PRECURSORS")

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

I hereby certify that this correspondence is being deposited on the date identified below with the United States Postal Service as first class mail in an envelope properly addressed to COMMISSIONER FOR PATENTS, P.O. Box 1450, Alexandria, VA 22313-1450.

January 14, 2004
Date

Lyn C. Fischer
Lyn C. Fischer

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P.O. Box 1450
Alexandria, VA 22313-1450

**RESUBMISSION OF LITERATURE REFERENCES
INDICATED AS MISSING FROM INFORMATION
DISCLOSURE STATEMENT SUBMITTED JUNE 21, 2002
AND REQUEST UNDER 37 C.F.R. §1.8 THAT SUCH
MISSING REFERENCES BE CONSIDERED FILED AS OF JUNE 21, 2002.**

An Information Disclosure Statement for the above-referenced application, together with copies of all the listed references, were submitted to the Patent Office along with a certificate of mailing in accordance with 37 CFR §1.8(a) on June 21, 2002. Examiner Shameem noted on Patent and Trademark

Office Form 1449 that all non-patent references were missing. Applicants hereby request, for the reasons presented below, that the references indicated as missing by Examiner Shameem be treated as submitted as of June 21, 2002, and be duly considered and made of record in the present application.

In accordance with 37 CFR §1.8(b)(2), Applicants are resubmitting herewith replacement copies of the missing references, along with a copy of the Information Disclosure Statement as submitted to the Patent and Trademark Office on June 21, 2002.

Applicants are also submitting a copy of the postcard receipt attached to the Information Disclosure Statement filed June 21, 2002, indicating that copies of the references were enclosed. The postcard has a date-in stamp of June 26, 2002, acknowledging that all materials had been received.

Included among the materials forwarded to the Patent Office were copies of U.S. patents, an international patent application, and literature references. All the documents were submitted concurrently, and since the Patent and Trademark Office acknowledges receipt of the U.S. and international patent documents, it is assumed that the literature references were also received. The only explanation that Applicants can offer for why the literature references have gone missing is that they must have been

misplaced by the Patent and Trademark Office after receipt.

Applicants believe that no fee is required for the resubmission of these literature references, as this appears to have been a mistake on the part of the Patent and Trademark Office. In the event a fee is required in connection with this matter, the Commissioner is hereby authorized to charge such a fee to Deposit Account No. 04-1406. A duplicate copy of this paper is enclosed.

Respectfully submitted,

DANN, DORFMAN, HERRELL AND SKILLMAN
A Professional Corporation

By Patrick J. Hagan
Patrick J. Hagan
PTO Registration No. 27, 643

Telephone: (215) 563-4100

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The following papers have been received

In re Application of
JOHN CORRIE ET AL.

Appl. No.
09/936,975

Attorney Docket No.
0380-P02671US0

For: 1-Acyl-7-Nitroindoline
Derivatives, Their
Preparation And Their Use
As Photocleavable
Precursors

IDS w/PTO-1449
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Patent and Trademark Office is respectfully requested to place its STAMP on this POSTAL CARD and place it in the outgoing mail.

Mailed: 21 June 2002

By: Patrick J. Hagan, Esq. (jmn)

ocket No. **OPPE**
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PATENT & TRADEMARK OFFICE

JOHN CORRIE et al.

09/936,975

0380-P02671US0

December 27, 2001

1-ACYL-7-NITROINDOLINE DERIVATIVES, THEIR PREPARATION AND THEIR USE AS PHOTOCLEAVABLE PRECURSORS

Not Yet Assigned

1635

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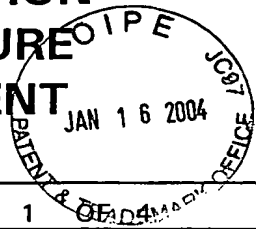
Patrick J. Hagan
Patrick J. Hagan

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97

In the event that a fee is required, the Commissioner is authorized to charge Deposit Account No. 04-1406 of the undersigned attorneys. A duplicate copy of this sheet is enclosed.

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INFORMATION DISCLOSURE STATEMENT



SHEET 1

Complete if known

Application Number: 09/936,975

Filing Date: December 27, 2001

First Named Inventor: JOHN CORRIE et al.

Group Art Unit: 1635

Examiner Name: Not Yet Assigned

Attorney Docket Number: 0380-P02671US0

UNITED STATES PATENT DOCUMENTS

EXAMINER'S INITIALS	CITE NO.	PATENT NUMBER	ISSUE DATE MM-DD-YYYY	FIRST NAMED INVENTOR
	A1	4,210,590	07/01/1980	Bruce E. Maryanoff et al.
	A2	6,268,389 B1	07/31/2001	Franz Esser et al.

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	CITE NO.	DOCUMENT NUMBER	COUNTRY OR REGION	DATE OF PUBLICATION MM-DD-YYYY	FIRST NAMED INVENTOR OR APPLICANT
	B1	WO 86/00527	WO	01/30/1986	DANA-FARBER CANCER INSTITUTE, INC.

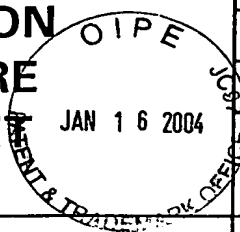
OTHER PRIOR ART - NON-PATENT DOCUMENTS

EXAMINER'S INITIALS	CITE NO.	Include name of the author (in Capital Letters), title of the article (when appropriate), title of the item(book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published
	C1	GOISSIS, G. et al., "Synthesis of Protected Peptide Acids and Esters by Photosolvolysis of 1-peptidyl-5-bromo-7-nitroindolines"; Proc. Am. Peptide Symp., 5: 559-61 (1977)
	C2	Yeda Research and Development Co., Ltd., "Reversible blocking of acyl groups during organic synthesis using 7-nitroindoline derivatives as blocking agents"; Chem. Abstracts, Ab. No. 181004x, 92(21): 637 (1980)
	C3	PASS, S. et al., "Racemization-Free Photochemical Coupling of Peptide Segments"; J. Am. Chem. Soc. 103: 7674-7675 (1981)
	C4	ADAMS, S.R. et al., "Biologically Useful Chelators That Take Up Ca ²⁺ upon Illumination"; J. Am. Chem. Soc. 111: 7957-7968 (1989)
	C5	PAPAGEORGIOU, G. et al., "Photorelease of Carboxylic Acids from 1-Acyl-7-nitroindolines in Aqueous Solution: Rapid and Efficient Photorelease of L-Glutamate"; J. Am. Chem. Soc. 121: 6503-6504 (1999)
	C6	CORRIE, J.E.T. et al., "Caged Nucleotides and Neurotransmitters"; Bioorganic Phytochemistry, Volume 2: Biological Applications of Photochemical Switches; Morrison, H. (Ed.), Chapter 5: 243-305 (John Wiley & Sons, 1993)
	C7	ADAMS, S.R. et al., "Controlling Cell Chemistry with Caged Compounds"; Annu. Rev. Physiol. 55: 755-784 (1993)

EXAMINER'S SIGNATURE	DATE CONSIDERED
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP §609. Draw a line through citation if citation not in conformance and reference not considered. Include a copy of this form with next communication to applicant.

INFORMATION DISCLOSURE STATEMENT



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Application Number: 09/936,975

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First Named Inventor: JOHN CORRIE et al.

Group Art Unit: 1635

Examiner Name: Not Yet Assigned

SHEET 2 OF 4

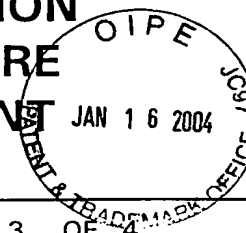
Attorney Docket Number: 0380-P02671US0

C8	KAPLAN, J.H., "Photochemical Manipulation of Divalent Cation Levels"; Annu. Rev. Physiol. 52: 897-914 (1990)
C9	PAPAGEORGIOU, G. et al., "Synthetic and Photochemical Studies of <i>N</i> -Arenesulfonyl Amino Acids"; Tetrahedron 55: 237-254 (1999)
C10	GIVENS, R.S. et al., "New Photoactivated Protecting Groups. 7. <i>p</i> -Hydroxyphenacyl: A Phototrigger for Excitatory Amino Acids and Peptides"; J. Am. Chem. Soc. 119: 8369-8370 (1997)
C11	FURUTA, T. et al., "Brominated 7-hydroxycoumarin-4-ylmethyls: Photolabile protecting groups with biologically useful cross-sections for two photon photolysis"; Proc. Natl. Acad. Sci. USA 96: 1193-1200 (1999)
C12	PAPAGEORGIOU, G. et al., "Synthesis and Properties of Carbamoyl Derivatives of Photolabile Benzoin"; Tetrahedron 53(11): 3917-3932 (1997)
C13	AMIT, B. et al., "Light-Sensitive Amides. The Photosolvolysis of Substituted 1-Acyl-7-nitroindolines"; J. Am. Chem. Soc. 98: 843-844 (1976)
C14	McKILLOP, A. et al., "Thallium in Organic Synthesis. XXVII. A Simple One-Step Conversion of Acetophenones into Methyl Phenylacetates Using Thallium(III) Nitrate (TTN)"; J. Am. Chem. Soc. 93: 4919-4920 (1971)
C15	MORTENSEN, M.B. et al., "Improved Preparation of Some Nitroindolines"; Org. Prep. Proced. Int. (OPPI Briefs) 28(1): 123-125 (1996)
C16	CARPINO, L.A. et al., "Peptide Synthesis via Amino Acid Halides"; Acc. Chem. Res. 29(6): 268-274 (1996)
C17	GALL, W.G. et al., "Synthesis of 7-Substituted Indoline Derivatives"; J. Org. Chem. 20: 1538-1544 (1955)
C18	ZUMAN, P. et al., "Addition, Reduction, and Oxidation Reactions of Nitrosobenzene"; Chem. Rev., 94: 1621-1641 (1994)
C19	BARTH, A. et al., "Time-Resolved Infrared Spectroscopy of Intermediates and Products from Photolysis of 1-(2-Nitrophenyl)ethyl Phosphates: Reaction of the 2-Nitrosoacetophenone Byproduct with Thiols"; J. Am. Chem. Soc., 119: 4149-4159 (1997)
C20	WAN, P. et al., "Photoredox chemistry of nitrobenzyl alcohols in aqueous solution. Acid and base catalysis of reaction"; Can. J. Chem., 64: 2076-2086 (1986)
C21	WAN, P. et al. "Structure and Mechanism in the Photo-Retro-Aldol Type Reactions of Nitrobenzyl Derivatives. Photochemical Heterolytic Cleavage of C-C Bonds"; J. Am. Chem. Soc., 110(13): 4336-4345 (1988)

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Application Number: 09/936,975

Filing Date: December 27, 2001

First Named Inventor: JOHN CORRIE et al.

Group Art Unit: 1635

Examiner Name: Not Yet Assigned

Attorney Docket Number: 0380-P02671US0

SHEET 3 OF 4

C22	WALKER, J.W., et al. "Photolabile 1-(2-Nitrophenyl)ethyl Phosphate Esters of Adenine Nucleotide Analogues. Synthesis and Mechanism of Photolysis"; J. Am. Chem. Soc., 110(21): 7170-7177 (1988)
C23	AMIT, B. et al., "Light-sensitive Amides. Photocleavage of <i>N</i> -Acyl-1,2,3,4-tetrahydro-8-nitroquinolines to give Free Carboxylic Acids"; J. Chem. Soc., Perkin Tran. I, 57-63 (1976)
C24	KAPLAN, J.H. et al., "Rapid Photolytic Release of Adenosine 5'-Triphosphate from a Protected Analogue: Utilization by the Na:K Pump of Human Red Blood Cell Ghosts"; Biochemistry, 17(10): 1929-1935 (1978)
C25	HAMILL, O.P. et al., "Improved Patch-Clamp Techniques for High-Resolution Current Recording from Cells and Cell-Free Membrane Patches"; Pflügers Arch., 391: 85-100 (1981)
C26	RAPP, G. et al., "A low cost high intensity flash device for photolysis experiments"; Pflügers Arch., 411: 200-203 (1988)
C27	KHODAKHAH, K. et al., "Fast activation and inactivation of inositol trisphosphate-evoked Ca ²⁺ release in rat cerebellar Purkinje neurones"; J. Physiol., 487.2: 343-358 (1995)
C28	CRABB, T.A. et al., "Microbiological Transformations, Part 6. Microbiological Transformations of Acyl Derivatives of Indoline, 1,2,3,4-Tetrahydroquinoline, 1,2,3,4-Tetrahydroisoquinoline and 2,3,4,5-Tetrahydro-1 <i>H</i> -1-benzazepine with the Fungus <i>Cunninghamella elegans</i> "; J. Chem. Soc. Perkin Trans. I, 1381-1385 (1985)
C29	MONRO, A.M. et al., "The Conformation of the Amide Group in <i>N</i> -Acyl-indolines and -1,2,3,4-tetrahydroquinolines"; J. Chem. Soc. (B), 1227-1230 (1971)
C30	TERENTEV, A.P. et al., "Introduction of Substituents in the Benzene Ring of Indole"; J. Gen. Chem. USSR, 29: 2835-2841 (1959)
C31	CORRIE, J.E.T. et al. "Synthesis and Absolute Stereochemistry of the Two Diastereoisomers of <i>P</i> ³ -1-(2-Nitrophenyl)ethyl Adenosine Triphosphate ('Caged' ATP)"; J. Chem. Soc. Perkin Trans. I, 1015-1019 (1992)
C32	KAWASE, M. et al., "Silica Gel Assisted Reductive Cyclization of 2-Nitro- α -piperidinostyrenes, Derived from 2-Nitrotoluenes, to Indoles"; J. Heterocyclic Chem., 24: 1499-1501 (1987)
C33	BUCHANAN, J.G. et al., "Synthesis of the Indole Nucleoside Antibiotics Neosidomycin and SF-2140"; J. Chem. Soc. Perkin Trans. I, 1417-1426 (1994)
C34	GANGJEE, A. et al., "Synthesis and Biological Evaluation of Nonclassical 2,4-Diamino-5-methylpyrido[2,3- <i>d</i>]pyrimidines with Novel Side Chain Substituents as Potential Inhibitors of Dihydrofolate Reductases"; J. Med. Chem., 40: 479-485 (1997)
C35	WIELAND, T. et al., "Synthese einiger Methoxy-oxindole und -indoline"; Chem. Ber., 96: 253-259 (1963) [English translation of Abstract attached]

EXAMINER'S
SIGNATURE

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**INFORMATION
DISCLOSURE
STATEMENT**

SHEET 4

Complete if known

Application Number: 09/936,975

Filing Date: December 27, 2001

First Named Inventor: JOHN CORRIE et al.

Group Art Unit: 1635

Examiner Name: Not Yet Assigned

Attorney Docket Number: 0380-P02671US0

	C36	KRUSE, L.I., "Synthesis of 4-Substituted Indoles from o-Nitrotoluenes"; Heterocycles, 16(7): 1119-1124 (1981)
	C37	CORRIE, J.E.T. et al., "Synthesis and evaluation of photolabile sulfonamides as potential reagents for rapid photorelease of neuroactive amines"; J. Chem. Soc., Perkin Trans. I, 1583-1592 (1996)
	C38	PAPAGEORGIOU, G. et al., "Effects of Aromatic Substituents on the Photocleavage of 1-Acyl-7-nitroindolines"; Tetrahedron 56: 8197-8205 (2000)

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SIGNATURE

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most pertinent of which the undersigned is aware. However, no representation is made or intended that more pertinent references do not exist.

This submission is not an admission that the references listed on the attached Form PTO-1449 constitute prior art against the claims of this application.

The Examiner is respectfully requested to confirm receipt and consideration of the cited references by initialing and returning a copy of the attached Form PTO-1449 in accordance with MPEP §609.

Early and favorable consideration of this application is respectfully requested.

Respectfully submitted,

DANN, DORFMAN, HERRELL & SKILLMAN
A Professional Corporation
Attorneys for Applicant(s)

By Patrick J. Hagan
Patrick J. Hagan
PTO Registration No. 27,643

Telephone: (215) 563-4100

Facsimile: (215) 563-4044

Enclosures - Form PTO-1449

Copies of references listed on PTO - 1449